United States Department of Agriculture

Forest Service

Northern Region

Draft Environmental Impact Statement

Pilgrim Creek Timber Sale Project

KOOTENAI NATIONAL FOREST

CABINET RANGER DISTRICT

SANDERS COUNTY, MONTANA

February 2013

Pilgrim Creek Timber Sale Project

Environmental Impact Statement

Cabinet Ranger District, Kootenai National Forest

Sanders County, Montana

Responsible Agency:	USDA Forest Service
Responsible Official:	Paul Bradford, Forest Supervisor Kootenai National Forest 31374 U.S. Highway 2 Libby, MT 59923-3022
Responsible for DEIS Preparation:	John Gubel, District Ranger Cabinet Ranger District
For Further Information Contact:	Doug Grupenhoff, Project Leader 2693 Highway 200 Trout Creek, MT 59874 (406) 827-3533

Abstract: This Draft Environmental Impact Statement (DEIS) documents the analysis of five alternatives, including a "No Action" alternative, that were developed for proposed timber harvest, reforestation, fuel treatment, road construction, road maintenance, and prescribed fire for big game forage enhancement and fuel reduction within the Pilgrim Creek drainage. This project is located in Sanders County, Montana on the Cabinet Ranger District.

The alternatives respond in different ways to major issues and have varying effects on the environment identified for this project. The major issues identified are wildlife security, mountain pine beetle activity, and road construction. **Alternative 1** is the No Action. **Alternative 2** is the proposed action. It would harvest trees on approximately 1411 acres, build 2.4 miles of new permanent road and 1.6 miles of temporary road, and prescribe burn approximately 4564 acres of natural fuels. This alternative would require a Forest Plan amendment to exceed open road density standards on big game summer range and would require approval to create eight openings over 40 acres in size totaling 548 acres. During the alternative development process it became obvious that mountain pine beetle was substantially affecting lodgepole pine in the upper Pilgrim Creek area. **Alternative 3** is a modification of the proposed action and is the preferred alternative. It places more emphasis on salvage of lodgepole pine resulting in an increased level of regeneration harvest and the creation of more openings larger than 40 acres. This alternative would also require a Forest Plan amendment to exceed open road density on big game summer range, and would also require approval to create seven openings greater than 40 acres in size totaling 1,002 acres. **Alternative 4** is a modification of the proposed action, developed to address issues associated with road construction by dropping all new road construction. This alternative also emphasizes treatment in lodgepole pine stands affected by mountain pine beetle and would create five openings larger than 40 acres in size totaling 798 acres and require a Forest Plan amendment to exceed open road density on big game summer range. **Alternative 5** is designed to not require any Forest Plan amendments, does not build new roads, and does not create openings over 40 acres in size. Prescribed burning of natural fuels to improve big game forage remains the same under all four action alternatives.

Important Notice: Public Participation in the Environmental Review Process

It is important that reviewers provide their comments at such times and in such a way that they are useful to the Agency's preparation of the EIS. Therefore, comments should be provided prior to the close of the comment period and should clearly articulate the reviewer's concerns and contentions. The submission of timely and specific comments can affect a reviewer's ability to participate in subsequent administrative review or judicial review.

Comments received in response to this solicitation, including names and addresses of those who comment will be part of the public record for this proposed action. Comments submitted anonymously will be accepted and considered; however, anonymous comments will not provide the respondent with standing to participate in subsequent administrative review or judicial review.

How to Comment and Timeframes

Written, facsimile, hand-delivered, oral, and electronic comments must be postmarked or received 45 days from the date the Notice of Availability is published in the Federal Register. The publication date in the Federal Register is the exclusive means for calculating the comment period for this proposal. You should not rely upon dates or timeframe information provided by any other source.

Only those who submit timely comments will be accepted as appellants following release of the Final EIS and Record of Decision. For appeal eligibility, each individual, or representative from each organization, submitting comments must either sign the comments or verify their identity upon request. Comments should be specific to the proposed activities and area being analyzed, and should address the adequacy of the statement and the merits of the alternatives discussed (40 CFR 1503.3). They should include: (1) name, address, telephone number, and organization represented, if any; (2) title of the document on which the comment is being submitted; (3) specific facts and supporting reasons for the Responsible Official to consider; and (4) signatures.

Send Comments on this DEIS to: John Gubel
Cabinet District Ranger
2693 Highway 200
Trout Creek, MT 59874
(406) 827-3533 FAX: (406) 827-0718

The office business hours for those submitting hand-delivered comments are 7:30 a.m. to 4:00 p.m. Monday through Friday, excluding holidays. Oral comments must be provided at the Responsible Official's office during normal business hours via telephone or in person; or at an official agency function (i.e. public meeting) that is designed to elicit public comments. Electronic comments must be submitted in rich text format (.rtf), Word (.doc) or Word Perfect format to: comments-northern-kootenai-cabinet@fs.fed.us . The subject line must contain the name of the project for which you are submitting comments. For electronically mailed comments, the sender should normally receive an automated electronic acknowledgement from the agency as confirmation of receipt. If the sender does not receive an automated acknowledgement of the receipt of comments, it is the sender's responsibility to ensure timely receipt by other means.

Summary

The Forest Service has prepared this draft environmental impact statement to disclose potential effects of the proposed action and the alternatives to the proposed action within and surrounding the Pilgrim Creek project area in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. The project area is located within the Cabinet Ranger District on Kootenai National Forest in Montana. This Final Environmental Impact statement discloses direct, indirect, and cumulative environmental impacts and irreversible or irretrievable commitments of resources that would result from implementation of the proposed action and alternatives.

The project area is located within the Kootenai National Forest in Sanders County. The Pilgrim Creek watershed is contained in the project area boundary, in the Rocky Mountain physiographic province. The Pilgrim Creek watershed is located south of the Clearwater River, and the town of Noxon, Montana. The project area encompasses approximately 36,602 acres.

Purpose and Objectives

1. Root diseases affect primarily Douglas-fir and true firs and are widespread across the District and in the project area, impacting stands to varying degrees. Root disease does not typically result in extensive areas of mortality, but tends to be a persistent, slow moving pathogen that will affect a site over an extended time period. Gaps created in the canopy provide important big game forage, short-lived snags, and abundant down wood that breaks down and decays rapidly. Douglas-fir, subalpine fir and other shade tolerant species will regenerate in these smaller openings, grow for a period of time, and often succumb to the same root diseases that created the opening, or which are more vulnerable to fire, resulting in a site that does not produce wood fiber to its full potential . Since most stands in the project area originated as a result of the 1910 fire, the area is dominated by stands of similar age that are now considered “mid-successional” and are being affected, to various degrees, by root diseases across nearly the entire project area. The desired condition is to have a mix of species that are less prone to being affected by root disease.

2. Lodgepole pine is a common tree species on the District and in the project area. However, extensive stands of almost pure lodgepole pine are relatively uncommon across the landscape. Those that do exist are essentially the same age class resulting from unusually large fires which burned through the project area in 1889 and 1910. This created early successional conditions in most stands - essentially starting them over again. Many of these stands were lodgepole stands and they regenerated again to lodgepole pine. The majority of the lodgepole pine-dominated communities are single aged, originating from these landscape scale disturbances, and are currently being infested by mountain pine beetle. Presently, high mortality rates are being observed in many

of the lodgepole pine dominated stands scattered across the project area. This infestation accelerated after the proposed action was developed. The interdisciplinary team had identified the homogeneity and age of lodgepole stands as a risk factor for mountain pine beetle infestation, and this concern was borne out as mountain pine beetle numbers increased and began killing substantial numbers of trees across the planning area.

3. One of the goals of the Kootenai National Forest Land and Resource Management Plan, pg. II-1, is to "Provide a sustained yield of timber volume responsive to national and regional needs, scheduled to encourage a stable base of economic growth in the dependent geographical area."

4. Big game forage in the project area is primarily shrubs, along with grasses and forbs. Natural disturbance (primarily wildfire) has been relatively uncommon since the 1910 fire and forage quality and availability has declined as forest canopies close. Cover to forage ratios are currently skewed towards cover and there is a need to improve both the quality and quantity of available big game forage. Cover to forage ratios on big game winter range are currently 73/27%, and on summer range it is 79/21%. The desired condition would include early successional habitats that provide a variety of abundant forage plants. Prescribed burning treatments would focus on expanding the incidence of big huckleberry, red stem ceanothus, rocky mountain maple, serviceberry, and willow in the appropriate habitat, and cover to forage ratios of 60/40 on winter and summer range as recommended by the Kootenai Forest Plan.

The Proposed Action

To meet the purpose and need for action, the Pilgrim Creek Timber Sale Project proposes:

- Approximately 587 acres of regeneration harvest are proposed, approximately 471 acres would be removed with skyline logging systems and approximately 116 acres would be tractor yarded. These treatment areas are generally located where lodgepole pine is susceptible to mountain pine beetle attack; is currently affected by this insect; or areas where Douglas-fir and/or true firs are infected with root disease at fairly high levels. Where root disease is present at higher levels, we propose to increase the proportion of root disease resistant species (such as western larch, western white pine, or ponderosa pine) on the site to maintain their ability to provide wood fiber over time. This would be done by favoring disease resistant species in the residual stand or by planting these species after harvest. For most areas where regeneration harvest is proposed in lodgepole pine stands, we will generally propose to allow natural revegetation of the site back to lodgepole pine. Lodgepole pine is a relatively minor component of the project area and generally occurs in even-aged stands that regenerated after the 1910 fire.

- Approximately 824 acres of intermediate harvest (commercial thinning) are proposed; approximately 315 acres would be tractor yarded and approximately 509 acres would require the use of a skyline system. This type of harvest leaves a fully stocked stand with the objective of improving growing conditions for the residual trees.

- To access proposed harvest areas, approximately 2.4 miles of new, permanent road and approximately 1.6 miles of temporary road would be constructed. Temporary roads would be removed following completion of treatment activities. All newly constructed permanent roads would be closed with a gate, berm, or other device to restrict motorized travel following completion of project activities. Approximately 47 miles of road reconstruction would occur on existing roads to bring them up to current standards for surface water management and provide safe hauling conditions.

- Approximately 6,950 acres have been identified as an approximate perimeter for prescribed burning to enhance forage quality and quantity for big game species, notably elk, deer, and bears. Generally, prescribed burn areas are on southerly aspects that historically provided important forage which is declining due to conifer encroachment. Areas where ignition would occur total approximately 4,564 acres, though fire would be permitted to creep outside of these ignition areas towards the perimeter. The intent is to minimize the amount of ground disturbance required for containment lines. Most burns would occur during the cooler, moister spring period when the risk of large, high intensity fires is lower. Depending on conditions, it is estimated that ignitions are unlikely to exceed 1,000 acres per year.

- This action would require a Management Area (MA) 12 (Big Game Summer Ranger and Timber) project-specific, non-significant amendment to the Forest Plan due to current road densities exceeding the standard of 0.75 linear miles of open roads per square mile. As a result of decisions made during a previous project the Pilgrim Planning Subunit is divided into two open road density areas (Figure 3-4). The Stevens Ridge Amendment Area includes the area bounded on the south by Marten Creek and on the north by Pilgrim Creek. This area is managed under a programmatic Forest Plan Amendment for open road densities which increases ORD standard to 1.46 miles per square mile when there are no active sales or 2.0 miles per square mile during sale activity. Outside of the Stevens Ridge Amendment Area, the Forest Plan Standard of 0.75 is in effect.

Issues

Based on public input the IDT recommended and the Responsible Official approved the significant issues listed below for detailed study. Each significant issue described below

includes a narrative statement with criteria or methods to measure change (effects).

Identified issues include, concerns about adverse impacts from new road construction, open road density in big game summer ranger, an increasing threat of forest damage due to mountain pine beetle activity, and concerns regarding harvest unit size exceeding 40 acres.

Alternatives

Based on public input, the ID team developed three action alternatives in addition to the required no action alternative and the proposed action. The issues described above were used to drive the development of alternatives to the proposed action.

Two general approaches were developed to treat stands in the Pilgrim Creek project area. Intermediate harvest is used to increase growing space between trees; improving growing conditions and tree vigor. Regeneration harvest followed by planting with root disease-resistant species removes more susceptible species and trends the stand towards a long-term condition where root disease plays a lesser role in within-stand dynamics. Regeneration harvest is also used to manage for early successional species such as lodgepole pine.

The original proposed action scoped in 2010 was developed based on preliminary assessments of stand conditions. In most areas, silvicultural prescriptions were designed to meet the purpose and need emphasizing intermediate harvest. Regeneration harvest was concentrated in specific areas with higher levels of root disease and in areas where lodgepole pine was the dominant species.

Further evaluation of stands proposed for harvest identified higher levels of root disease than expected. There was concern that intermediate timber harvest in disease-susceptible stands could exacerbate the effects of root disease and/or promote its spread. As a result, alternatives to the proposed action all proposed more regeneration harvest followed by planting with root disease resistant species such as larch, ponderosa pine, and white pine. This type of approach was used in alternatives 3, 4, and 5.

Additionally, during this time, lodgepole pine mortality due to mountain pine beetle activity began to increase. Most lodgepole pine stands in the area originated following the 1910 fires and are now particularly susceptible to insect and disease attack. The IDT recognized this and had crafted a purpose and need statement that addressed increasing age class diversity in LP stands. Alternative 3 was developed with the intention of capturing some of the economic value in the dead and dying lodgepole pine while reforesting those areas naturally with lodgepole pine. This approach required building new roads in areas where lodgepole forest types are found, and resulted in larger units due to the nature of lodgepole occurrence in the area.

Alternative 4 was developed to evaluate an alternative that did not build any new road. This alternative emphasized treatment of lodgepole pine being affected by mountain pine

beetle and many of the same units in Alternative 3 that could be accessed from existing roads.

Alternative 5 was designed to address the same concerns as Alternative 4 with modifications to keep regeneration units below 40 acres and meet all Forest Plan standards for open road density. This alternative would not require any site-specific Forest Plan amendments.

Table of Contents

Chapter 1 – Purpose and Need

Background 1-1

Setting 1-3

Existing Condition 1-4

Desired Condition 1-5

Purpose and Need for Action 1-6

Proposed Action 1-8

Relationship to the Forest Plan 1-8

Decision Framework 1-11

Decisions to be Made 1-12

Chapter 2 - Alternatives

Introduction 2-1

Public Involvement 2-2

Issues 2-3

Alternatives Considered but Eliminated from Detailed Study 2-6

Alternative 1 2-7

Alternative 2 – Proposed Action 2-7

Alternative 3 2-13

Alternative 4 2-22

Alternative 5 2-28

Alternative Comparison 2-50

Table of Contents (continued)

Chapter 3 - Affected Environment and Environmental Consequences

Introduction	3-1
Cumulative Effects Catalog	3-3
Vegetation	3-9
Wildlife/Old Growth	3-47
Fire and Fuels	3-135
Hydrology	3-159
Fisheries	3-201
Soils	3-232
Scenic Resources	3-262
Inventoried Roadless Areas	3-277
Other Resources	3-289
Noxious Weeds	3-295
Cultural Resources	3-303
Threatened and Sensitive Plants	3-307
Air Quality	3-321
Economics	3-334
Disclosures	3-343

Table of Contents (continued)

Appendices

Alternative Maps	Appendix A
List of Preparers	Appendix B
Access Management Plan	Appendix C
Best Management Practices	Appendix D
Scenic Resources, Viewpoints and Images	Appendix E
Inventoried Roadless Areas	Appendix F
Literature Cited	Appendix G
Glossary	Appendix H
List of Recipients	Appendix I
Monitoring Plan	Appendix J
Index	Appendix K

List of Tables

Table		Page
1-1	Project Area Management Descriptions and Goals	1-31
2-1	Activity Summary For Alternative 2	2-8
2-2	Over 40 Acre Openings in The Proposed Action	2-11
2-3	Alternative 2 Unit Treatment Summary	2-11
2-4	Activity Summary For Alternative 3	2-16
2-5	Over 40 Acre Openings In Alternative 3	2-18
2-6	Alternative 3 Unit Treatment Summary	2-19
2-7	Activity Summary For Alternative 4	2-24
2-8	Over 40 Acre Openings in Alternative 4	2-26

List of Tables - continued

Table		Page
2-9	Alternative 4 Treatment Summary	2-26
2-10	Activity Summary for Alternative 5	2-29
2-11	Alternative 5 Unit Treatment Summary	2-31
2-12	Prescribed Fire Summary- All Action Alternatives	2-38
2-13	Roads Proposed For Passive Decommissioning	2-40
2-14	Proposed Harvest Acres by MA	2-43
2-15	Proposed Prescribed Burning Acres by MA	2-43
2-16	Comparison of Alternatives	2-44
3-1	Summary of Past, Ongoing, and Reasonably Foreseeable Actions	3-3
3-2	VRU Groups and Constituent VRUs	3-10
3-3	Methods for Estimating Stand-Level Successional Stages	3-11
3-4	Comparison of Successional Stage Reference Conditions to Current	3-17
3-5	Past Harvest Activity On FS Lands In The Analysis Area	3-25
3-6	Harvest Method Summary by Alternative	3-35
3-7	Proposed Harvest Acres Accessed by Road Construction	3-39
3-8	Number and Total Acreage of Openings Larger than 40 Acres	3-40
3-9	Old Growth Acres Old growth acres under 5,500 feet elevation NFS Lands in Pilgrim Creek subunit and Forest-wide.	3-51
3-10	Old Growth (≤5,500' elevation) Distribution by VRU on NFS Lands in the * PSU	3-52
3-11	Summary of measurement criteria to evaluate effects to old growth	3-53
3-12	Existing Cavity Habitat Potential	3-59
3-13	Cavity Excavator Potential Population Level (%) by Alternative Based on Forest Plan Standards	3-60
3-14	Acres of project activities that impact Snag Level by Alternative	3-62
3-15	Management Indicator Species	3-66

3-16	Elk Habitat by Alternative	3-70
3-17	Potential Population Index by Alternative	3-77
3-18	Home Range/foraging area diversity matrix for goshawk habitat analysis	3-79
3-19	Goshawk Habitat and PPI Changes by Alternative	3-79
3-20	Sensitive Wildlife Species on the Kootenai National Forest	3-85
3-21	Change in Black-backed Woodpecker Habitat and PPI by Alternative	3-91
3-22	Fisher Habitat and PPI Changes by Alternative	3-96
3-23	Western Toad Habitat Impacted by Alternative	3-107
3-24	Sensitive Species Summary	3-111
3-25	Threatened, Endangered, and Proposed Wildlife Species: Project Area Status	3-112
3-26	Changes to Grizzly Habitat Parameters by Alternative for the Clark Fork BORZ Polygon	3-117
3-27	Acres Impacted by Point Source Disturbance	3-118
3-28	Acres Impacted by Road Construction and Use	3-118
3-29	Existing Lynx Habitat Components on NFS Lands	3-122
3-30	Existing Lynx Habitat Components on NFS Lands	3-124
3-31	Percent Unsuitable Habitat within impacted LAUs	3-125
3-32	Regeneration Harvest in Lynx Habitat in the last 10 years	3-126
3-33	Multi-Story Forage snowshoe hare habitat impact summary	3-127
3-34	Partners in Flight Priority habitats/species for BCR10	3-131
3-35	Dominant Vegetation Types Approximating PIF Priority Habitats	3-132
3-36	Fire Regime Condition Class	3-140
3-37	VRU Summary Table	3-141
3-38	Existing Fuel Models and Crown Fire Potential	3-142
3-39	Current Range of CBH and CBD in Treatment Areas	3-144
3-40	Vegetative Treatment Acres by Alternative	3-147
3-41	Fuel Reduction Activity Treatment Types by Alternative	3-147
3-42	Existing and Post Treatment Fuel Models and Crown Fire Potential by Alternative	3-148
3-43	Suppression Capabilities based on Flame Length by Alternative	3-152
3-44	Summary of Fuel Indicators by Alternative	3-153
3-45	Acres Treated in Fire Regime Group 1 by Alternative	3-154
3-46	Water Quality Limited Segments	3-161
3-47	Rosgen Channel Types	3-164

3-48	Rosgen Bed Material Size Categories	3-165
3-49	Road Density Classification	3-167
3-50	Water Yield and Established RPFIs	3-171
3-51	Channel Conditions	3-176
3-52	Existing Annual Sediment Contributions from Haul Routes	3-176
3-53	TRD Existing Condition	3-178
3-54	Predicted Changes in Peak Flows	3-182
3-55	Timber Harvest Guidelines in RHCAs on the KNF	3-185
3-56	Haul Route Sediment Reduction by Alternative	3-188
3-57	Changes in TRD by Alternative	3-189
3-58	RHCA Categories and Standard Widths	3-202
3-59	Interim Riparian Management Objectives	3-203
3-60	Summary of Fish Sampling Activities from 1993 to 2007	3-209
3-61	Summary of Fish Habitat Characteristics of project area streams	3-215
3-62	Conditions Affecting Fish/Aquatic Habitat in the Pilgrim Planning Area	3-217
3-63	Comparison of Peak Flow Increases for Fish-bearing Watersheds	3-219
3-64	Miles of Road Work in Fish-bearing watersheds	3-221
3-65	Comparison of sediment contribution to stream channels for fish bearing watersheds from haul road segments adjacent to crossings between no action and action alternatives before and after implementation of BMP's.	3-223
3-66	Proposed Ecosystem Burn Acres by 7th Code HUC	3-225
3-67	Monitoring Results of Detrimental Soil Disturbance from Management Activities on the Kootenai National Forest (Kuennen 2007)	3-235
3-68	Landtypes in the Analysis Area	3-241
3-69	Soil Productivity in the Pilgrim Creek Project Area	3-242
3-70	Unit Acres on Sensitive Soils	3-246
3-71	Calculated DSD Related to Proposed Activities	3-247
3-72	Calculated DSD Related to Temp Road Construction	3-252
3-73	Type and Amount of Fuels Treatments by Alternative	3-252
3-74	Recommended Levels of CWD for Regeneration Harvest Units	3-255
3-75	Visual Quality Objectives Descriptions	3-262

3-76	Unit Treatment Prescriptions, VQO and Viewpoints	3-264
3-77	Natural Fuels Treatments by Management Area	3-269
3-78	Acres of Harvest by Management Area – Alternative 2	3-270
3-79	Acres of Harvest by Management Area – Alternative 3	3-270
3-80	Acres of Harvest by Management Area – Alternative 4	3-270
3-81	Acres of Harvest by Management Area- Alternative 5	3-271
3-82	Acres of Harvest by Alternative	3-272
3-83	Inventoried Roadless Areas	3-277
3-84	Wilderness Attributes and Descriptions	3-278
3-85	Wilderness Attributes and Roadless Characteristics	3-282
3-86	Recreation Opportunity Spectrum	3-290
3-87	Detrimental Soil Disturbance Levels – Noxious Weeds	3-298
3-88	Acres of Harvest by Prescription and Logging System	3-299
3-89	Road Construction by Decade	3-300
3-90	Known and Suspected Sensitive Plant Species in Pilgrim Creek	3-311
3-91	Summary of Effects to Known and Suspected Sensitive Species	3-312
3-92	Findings for Threatened and Endangered Plant Species	3-317
3-93	Sensitive Plant Species on the KNF and Status in Pilgrim Creek	3-317
3-94	Known and Suspected Sensitive Plant Species	3-320
3-95	Modeled Particulate Production – Air Quality	3-327
3-96	Probability of Wind Direction that Would Affect Areas of Concern	3-331
3-97	Project Feasibility and Financial Efficiency	3-339
3-98	Reforestation and other Restoration Expenditures	3-340

CHAPTER 1: Purpose and Need for Action

Introduction

The Forest Service has prepared this Draft Environmental Impact Statement (DEIS) for the proposed harvest of green and dead timber, and prescribed fire use in the Pilgrim Creek drainage, on the Cabinet Ranger District. This DEIS addresses; 1) the proposed action and three additional alternatives, and the no action alternative; 2) issues associated with the proposal; and 3) direct, indirect and cumulative environmental effects that would result from implementation of the proposed action or any of the alternatives

Document Organization

The Forest Service has prepared this DEIS in accordance with the National Environmental Policy Act (NEPA), and other relevant Federal and State laws and regulations. This DEIS discloses the environmental consequences that could result from the proposed action and alternatives.

Format for this document follows the Council on Environmental Quality (CEQ) recommended format (40 CFR 1502.10). Chapters contain the following information:

Chapter 1– Purpose and Need: Includes a brief description of the area, purpose of and need for action, the agency's proposal for achieving the purpose and need, and a listing of what decisions are to be made.

Chapter 2 – **Alternatives**: Provides a more detailed description of the agency's proposed action as well as alternative methods of achieving the stated purpose and measures used to mitigate environmental effects. These alternatives were developed based on significant issues raised by Team specialists, the public and other agencies. It includes information on how the public was informed, and a description of "key" and other tracking issues relevant to the proposed action. Finally, this section provides a summary table of the environmental consequences associated with each alternative.

Chapter 3 - Affected Environment and Environmental Consequences: This chapter describes the affected environment, the current condition of resources involved, and the environmental effects of implementing the proposed action and other alternatives. This chapter is organized by resource area, and contains required agency disclosures.

Appendices - Provides more detailed information and maps used to support the analysis presented in the DEIS, and contains a list of those who helped prepare this document, and a list of individuals, organizations, and agencies receiving this document. It also provides a glossary of terms, literature cited, and index.

Index - The index provides page numbers by document topic.

Location and Area

The Pilgrim project area is located west and southwest of Noxon (Figure 1-1) in Sanders County, Montana (T25N; R32W; T29N; R33W; R34W; PMM), and encompasses an area approximately 36,602 acres, of which approximately 29,987 acres are National Forest System lands (see Vicinity Map, Figure 1.1).

The project area consists of National Forest System (NFS) lands in and adjacent to the Pilgrim Creek drainage, which drains into the Clark Fork River, a tributary of the Columbia River basin. The primary point of access from State Highway 200 is the Pilgrim Creek Road #149, which accesses the drainage and includes a number of minor roads into private land.

The project area includes Pilgrim Creek and its tributaries- Fourmile Gulch, Baxter Gulch, Telegraph Creek, Skeleton Creek, West Fork Pilgrim and South Fork Pilgrim, as well as Smeads Creek, Stevens Creek, and smaller tributaries, some of which drain directly into the Clark Fork River. Some landowners downstream of the project area use water from springs and creeks for domestic use and stock use.

Vegetation communities are primarily forested, bisected by streams and ridges.The majority of present day forest cover in the project area originated from the large fires of 1889 and 1910. Fire suppression since that time has reduced the influence of fire on forest dynamics which has led to increased fuel loadings, higher stocking levels, and an increasing presence of shade-tolerant trees in the understory. The adjacent privately owned lands are a mix of forested, non-forested, and pastoral or agriculture land which is typical of rural development in this area. Insects, particularly mountain pine beetles, are currently infesting a high proportion of the lodgepole pine stands in the area causing significant tree mortality.

The climate in the Pilgrim Creek drainage can be described as a modified Pacific maritime setting with most of the yearly moisture coming as snow during the winter months.

Soils in the project area have a volcanic ash-influenced deposit. This layer, along with the uppermost organic layer, is the primary source of the vegetative productivity. (See Chapter 3, Soil Resources section.)

National Forest lands in the project area have long been utilized by residents and visitors for recreation, firewood gathering, hunting, and huckleberry picking (See Chapter 3, Other Resources sections.)

Whitetail deer, mountain lion, elk, moose, black bear, as well as many other wildlife species inhabit this area. Gray wolves and grizzly bears are known to be at least occasional visitors to the area. Native fish species within the Pilgrim project area include westslope cutthroat trout, bull trout, large scale sucker, long nose dace, mountain whitefish, and slimy sculpin (See Chapter 3, Wildlife and Fisheries sections).

Background

The Cabinet Ranger District proposes to conduct timber harvest on approximately 1,411 acres, and use prescribed fire on approximately 4564 acres of NFS lands near the community of Noxon, Montana, in the Pilgrim Creek watershed.

The Cabinet Ranger District identified the Pilgrim Creek drainage as an area of concern from a forest health perspective. An Interdisciplinary Team (IDT) comprised of Forest Service resource specialists developed this project while working with interested stakeholders (see Chapter 2, Proposed Action Scoping and Development).

Historical Background

Before European settlers arrived in Montana, forests in the Clark Fork Valley (northwestern Montana) were composed primarily of western larch, western white pine, ponderosa pine, and Douglas-fir. Large western red cedar grew in the valley bottoms and riparian areas. The more fire-dependent tree species (ponderosa pine, western larch) grew on some of the ridges and the drier sites, primarily south and southwest aspects. Western white pine, and Douglas-fir trees grew on the more shaded (north and northwest) aspects sides of the landscape. These forests developed through frequent, low to moderate intensity surface fires with longer fire intervals common on northerly slopes.

Following two large fire events in 1889 and 1910, a fire suppression policy began which focused on eliminating all fires from the landscape. Fire suppression became more effective by the 1950s, eliminating many of the natural fire effects that historically occurred on the landscape. Under the current suppression policy, fires are aggressively extinguished accounting for a decreased occurrence of frequent low intensity fires. Over time, as natural fuels have accumulated across the landscape, this practice has increased the probability of larger more intense fires as a result of natural fuels accumulating on the landscape.

Changes in Forest Vegetation and Watersheds

The large wildfires of 1889 and 1910, several decades of effective fire suppression and timber harvesting in the last century have changed the development of the forests in Pilgrim Creek. The exclusion of fire has resulted in dense stands composed mainly of Douglas-fir, grand fir and lodgepole pine. In some areas, Ponderosa pine has gradually disappeared because of Douglas-fir encroachment. In other areas, stands contain a high number of trees per acre with multi-storied tree canopies, which make them susceptible to intense stand replacing crown fires. The condition of these stands deviates from historic conditions found prior to the 1880's when unmanaged wildfires occurred within the ecosystem. Age class distribution in the project area is skewed towards mid-successional stands with a lack of early and late successional stands represented on the landscape.

Desired Condition

The Kootenai National Forest Plan includes a statement of the Desired Condition (DC) for the Forest. The Forest Plan discussion of DC is broad in nature and addresses conditions at the end of the first and fifth decades of the life of the plan. Management Area-specific goals and standards found in Volume1, Chapter III of the Kootenai Forest Plan. The DC provides resource managers with a view of where they should be directing their management efforts in order to meet the multiple resource demands of the future.

These DCs are expressed by Vegetative Response Units (VRUs), the currently accepted system of expressing DCs in ecological terms. These DCs are based or derived from historic conditions modified to consider current resource capabilities such as watershed, wildlife, and scenic resources. They present options for managers to move forest stands within individual VRUs toward a more desirable and sustainable future condition.

The Interdisciplinary Team's strategy to move from the existing condition toward the Desired Condition includes a variety of activities that focus on managing the over-abundance of mid-successional stands, shade tolerant tree species, developing both early and late successional communities, and increasing representation of root disease resistant species.

Desired Conditions for the Pilgrim Creek project area include:

1. A landscape pattern with species composition and successional stages representative of historic conditions (Vegetation discussion in Chapter 3) . Species composition and successional stages have reduced levels of shade tolerant species (Douglas-fir, grand fir, and western hemlock) and higher levels of seral species, specifically ponderosa pine, white pine and western larch.
2. Forest insects and disease are present at endemic levels with an increased representation of root disease tolerant species on the landscape. Stand resilience and health is supported by diversified age classes, stand structure, density and species composition reducing the potential of broad scale insect and disease disturbances.
3. Vegetative conditions provide for a full range of ecosystem diversity, including a full range of habitats with varying ages and structures necessary to maintain self-sustaining populations of native wildlife species; including habitats for species associated with late-successional structures, climax community types, and old growth forests.
4. A sustainable supply of forest products to support the local economy.

Purpose and Need

Current forest conditions in the proposed treatment areas are generally dense and overcrowded from years of fire suppression, and dominated by Douglas-fir. The absence of fire in the project area, altered composition due to insects and diseases, and natural succession have led to in-growth of fire-vulnerable tree species in the shaded understories and reduced the amount and quality of available big game forage.

The **Purpose** of the Pilgrim Creek Project is to maintain and increase forest resilience to insects, disease and disturbance by increasing age class diversity in lodgepole pine stands, improving growing conditions and favoring root disease resistant species in mixed conifer stands affected by root disease, and improving big game forage production while providing for the local economy through commercial timber harvest.

The purpose and need guided development of the proposed action for this project. Alternatives were driven by issues generated internally and during scoping, but also had to respond to the purpose and need for treatment.

1. <u>There is a need for silvicultural treatments to reduce stand densities, improve growing conditions, and increase the proportion of root disease-resistant tree species in the area.</u>

Root diseases affect primarily Douglas-fir and true firs and are widespread across the District and in the project area, impacting stands to varying degrees. Root disease does not typically result in extensive areas of mortality, but tends to be a persistent, slow moving pathogen that will affect a site over an extended time period. Gaps created in the canopy do provide important big game forage, short-lived snags, and abundant down wood that breaks down and decays rapidly. Douglas-fir, subalpine fir and other shade tolerant species will regenerate in these smaller openings, grow for a period of time, and often succumb to the same root diseases that created the opening, resulting in a site that does not produce wood fiber to its full potential. Since most stands in the project area originated as a result of the 1910 fire, the area is dominated by stands of similar age that are now considered “mid-successional” and are being affected, to various degrees, by root diseases across nearly the entire project area. The desired condition is to have a mix of species that are less prone to being affected by root disease. One strategy to improve wood fiber output on these sites is to regenerate the stands and reforest with species that are less susceptible to these root pathogens including western larch, ponderosa pine, and western white pine. The purpose of these treatments is to reduce the effects of root disease on residual trees and reduce the susceptibility of trees on the site to root disease in the future. In some stands being impacted by root disease there are enough root disease-resistant trees present that commercial thinning can be used to remove many of the more susceptible species and leave a stand composed of more

disease resistant species. At the forest stand scale this will result in conditions that are less susceptible, in general, to impacts to standing biomass from root disease over time, and would allow increased management flexibility in the future.

The Kootenai National Forest Land and Resource Management Plan (Forest Plan, pg. II-1) includes a goal to "*Maintain diverse age classes of vegetation for viable populations of all existing, native vertebrate wildlife species, including old growth timber in sufficient quality and quantity to maintain viable populations of old growth dependent species and to maintain habitat diversity representative of existing conditions*". Additionally, Timber Objectives (page II-4) include "*Insects and disease will be controlled to historic endemic levels, and lodgepole pine will be harvested prior to future outbreaks of mountain pine beetle. Other problems such as root rot, mistletoe, blister rust, and spruce budworm will be addressed in silvicultural prescriptions utilizing integrated pest management strategies and treatments*".

2. <u>There is a need to increase age class diversity in lodgepole pine dominated forest communities in the project area.</u>

Lodgepole pine is a common tree species on the District and in the project area. However, extensive stands of almost pure lodgepole pine are relatively uncommon across the landscape. Most lodgepole pine in the project area are essentially the same age class resulting from unusually large fires which burned through the project area in 1889 and 1910. This created early successional conditions in most stands - essentially starting them over again. Many of these stands were lodgepole stands and they regenerated again to lodgepole pine. The majority of the lodgepole pine-dominated communities are single aged cohorts originating from these landscape scale disturbances, and are currently being infested by mountain pine beetle. Presently, high mortality rates are being observed in many of the lodgepole pine across the project area. This infestation accelerated after the proposed action was developed. The interdisciplinary team had identified the homogeneity and age of lodgepole stands as a risk factor for mountain pine beetle infestation, and this concern was borne out as mountain pine beetle numbers increased and began killing substantial numbers of trees across the planning area. Alternatives to the proposed action included a number of units designed specifically to capture some of the value of the infested lodgepole pine and return the sites to productive timber growth.

Increasing the age class diversity, to provide a variety of stand ages across the landscape is desired to help build resilience and help ensure long term retention of this important forest type on the District. The Forest Plan, pg. II-2, includes a goal to "*Harvest the maximum amount of high risk lodgepole pine marketable, to minimize losses from the mountain pine beetle*". Additionally, on pg. II-1, there is a goal to "*Maintain diverse age classes of vegetation for viable populations of all existing native, vertebrate wildlife species".* These two goals will need to be balanced in formulation of the proposed action.

3. <u>There is a need to provide local employment related to forest management and restoration activities and to supply forest products to contribute to the support of that segment of the local and regional economy dependent on timber products.</u>

One of the goals of the Kootenai National Forest Land and Resource Management Plan, pg. II-1, is to "Provide a sustained yield of timber volume responsive to national and regional needs, scheduled to encourage a stable base of economic growth in the dependent geographical area."

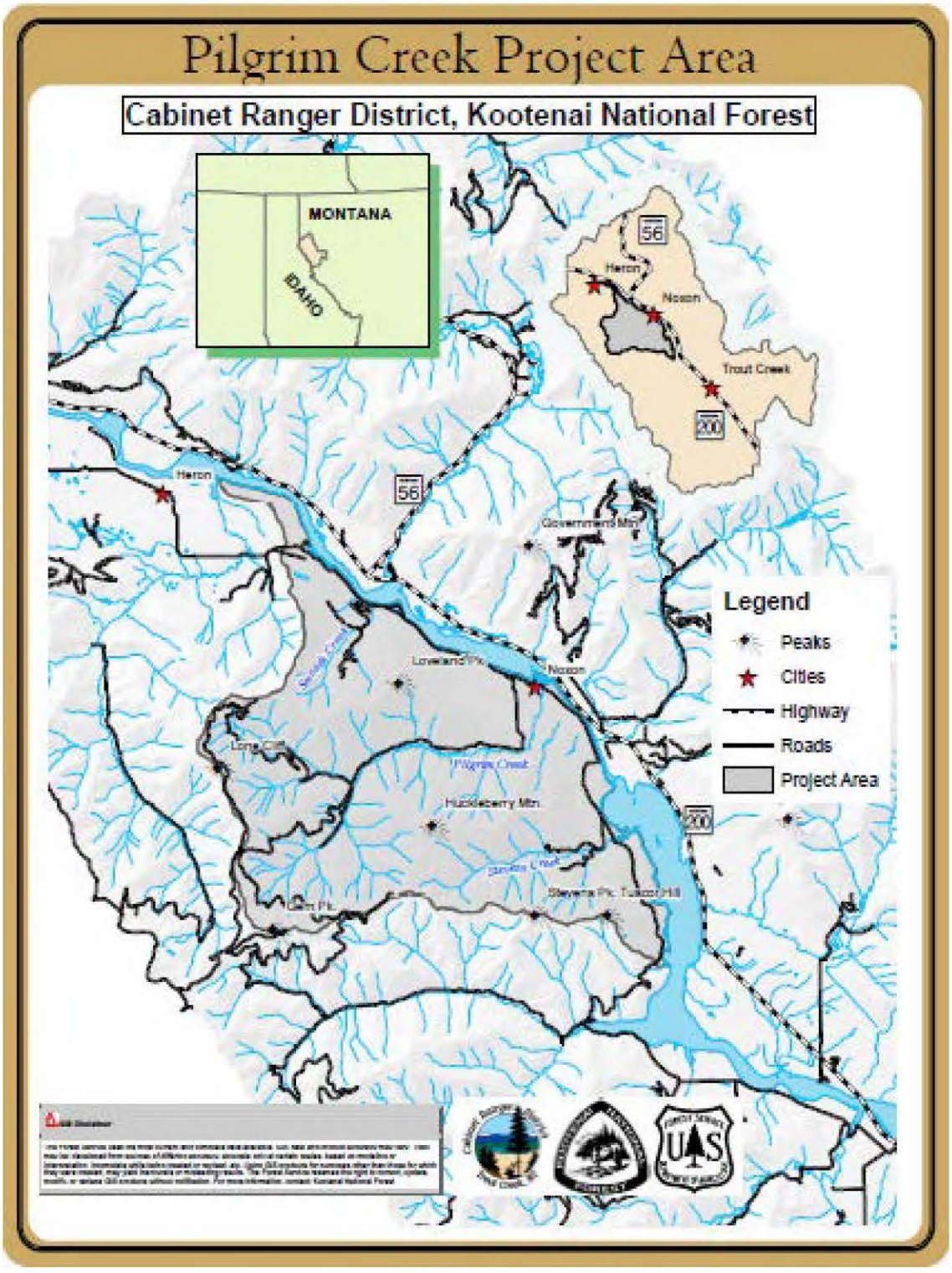
4. There is a need to improve forage production and quality through the use of such treatments as commercial timber harvest, slashing, and prescribed fire.

Big game forage in the project area is primarily shrubs, along with grasses and forbs. Natural disturbance (primarily wildfire) has been relatively uncommon since the 1910 fire and forage quality and availability has declined as forest canopies close. Cover to forage ratios are currently skewed towards cover and there is a need to improve both the quality and quantity of available big game forage. Cover to forage ratios on big game winter range are currently 73/27%, and on summer range it is 79/21%. The desired condition would include early successional habitats that provide a variety of abundant forage plants. Prescribed burning treatments would focus on expanding the incidence of big huckleberry, red stem ceanothus, rocky mountain maple, serviceberry, and willow in the appropriate habitat, and cover to forage ratios of 60/40 on winter and summer range as recommended by the Kootenai Forest Plan. For areas that contain Rocky Mountain maple and serviceberry, the objective will be to rejuvenate decadent plants and enhance forage palatability. Existing grass and forb communities will be enhanced through the application of prescribed fire. Forest Plan goals (pg. II-2) include "*Maintain big game habitat to support the recreational hunting demand for resident big game species*".

Figure 1-1. Typical Stand Conditions in Mixed Conifer Stands in the Pilgrim project area.

Figure 1-2. Typical Stand Conditions in the root disease impacted stands in Pilgrim Creek project area.

Figure 1-3. The Pilgrim Creek Timber Sale Project Area



Proposed Action

The Proposed Action includes vegetation management activities on NFS lands within the project area, and is presented in detail in Chapter 2. The proposed management actions are summarized below:

To meet the purpose and need for action, the Pilgrim Creek Timber Sale Project proposes:

- Approximately 587 acres of regeneration harvest are proposed, approximately 471 acres would be removed with skyline logging systems and approximately 116 acres would be tractor yarded. These treatment areas are generally located where lodgepole pine is susceptible to mountain pine beetle attack; is currently affected by this insect; or areas where Douglas-fir and/or true firs are infected with root disease at fairly high levels. Where root disease is present at higher levels, we propose to increase the proportion of root disease resistant species (such as western larch, western white pine, or ponderosa pine) on the site to maintain their ability to provide wood fiber over time. This would be done by favoring disease resistant species in the residual stand or by planting these species after harvest. For most areas where regeneration harvest is proposed in lodgepole pine stands, we propose to allow natural revegetation of these sites back to lodgepole pine. Lodgepole pine is a relatively minor component of the project area and generally occurs in even-aged stands that regenerated after the 1910 fire.

- Approximately 796 acres of intermediate harvest (commercial thinning) are proposed; approximately 315 acres would be tractor yarded and approximately 509 acres would require the use of a skyline system. This type of harvest leaves a fully stocked stand with the objective of improving growing conditions for the residual trees.

- To access proposed harvest areas, approximately 2.4 miles of new, permanent road and approximately 1.6 miles of temporary road would be constructed. Temporary roads would be removed following completion of treatment activities. All newly constructed permanent roads would be closed with a gate, berm, or other device to restrict motorized travel following completion of project activities. Approximately 47 miles of road reconstruction would occur on existing roads to bring them up to current standards for surface water management and provide safe hauling conditions.

- Approximately 6,950 acres have been identified as an approximate perimeter for prescribed burning to enhance forage quality and quantity for big game species, notably elk, deer, and bears. Generally, prescribed burn areas are on southerly aspects that historically provided important forage which is declining due to

conifer encroachment. Areas where ignition would occur total approximately 4,564 acres, though fire would be permitted to creep outside of these ignition areas towards the perimeter. The intent is to minimize the amount of ground disturbance required for containment lines. Most burns would occur during the cooler, moister spring period when the risk of large, high intensity fires is lower. Depending on conditions, it is estimated that ignitions are unlikely to exceed 1,000 acres per year.

- This action would require a Management Area (MA) 12 (Big Game Summer Ranger and Timber) project-specific, non-significant amendment to the Forest Plan due to current road densities exceeding the standard of 0.75 linear miles of open roads per square mile. As a result of decisions made during a previous project the Pilgrim Planning Subunit is divided into two open road density areas (Figure 3-4). The Stevens Ridge Amendment Area includes the area bounded on the south by Marten Creek and on the north by Pilgrim Creek. This area is managed under a programmatic Forest Plan Amendment for open road densities which increases ORD standard to 1.46 miles per square mile when there are no active sales or 2.0 miles per square mile during sale activity. Outside of the Stevens Ridge Amendment Area, the Forest Plan Standard of 0.75 is in effect.

LAWS AND POLICY

Development of this DEIS follows the National Forest Management Act (NFMA), 16 U.S. Code 1604; Title 36, Code of Federal Regulations, Part 220 (36 CFR 220); and Council of Environmental Quality, Title 40; CFR, Parts 1500-1508, National Environmental Policy Act (NEPA).

Many federal and state laws, including the Endangered Species Act, Clean Air Act, and Clean Water Act also guide this analysis. Following is a brief description of the laws and policies applicable to this analysis:

American Antiquities Act of 1906; This Act makes it illegal to appropriate, excavate, injure, or destroy any historical, prehistoric ruin or monument, or any object of antiquity, situated on lands owned by the Government of the United States, without permission of the Secretary of the Department of the Agency having jurisdiction over the lands on which said antiquities are situated.

National Historic Preservation Act of 1966, as amended; This Act requires Federal agencies to consult with American Indian Tribes, State and local groups before nonrenewable cultural resources, such as archaeological and historic structures, are damaged or destroyed. Section 106 of this Act requires Federal agencies to review the effect project proposals may have on cultural resources in the project area.

Endangered Species Act of 1973, as amended; The purposes of this Act are to "*provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such tests as may be appropriate to achieve the purpose of the treaties and conventions set*

forth in subsection (a) of this section." The Act also states "*It is further declared to be the policy of congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act."*

Migratory Bird Treaty Act of 1918; This Act is to establish an international framework for the protection and conservation of migratory birds. The Act makes it illegal, unless permitted by regulation, to *pursue, hunt, take, capture, deliver for shipment, ship, cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, including in this Convention…for the protection of migratory birds…or any part, nest, or egg of any such bird"* (16 USC 703). The original 1918 statue implemented the 1916 Convention between the United States and Great Britain (for Canada). Later amendments implemented treaties between the United States and Mexico, Japan, and the Soviet Union (now Russia).

National Environmental Policy Act (NEPA) of 1969 as amended; Purposes of this Act are "To declare a national policy which will encourage productive and enjoyable harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nations; and to establish a Council on Environmental Quality" (42 USC Sec. 4321). The law further states "*it is the continuing policy of the Federal Government, in cooperation, to use all practical means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the present and future generation of Americans."* This law essentially pertains to public disclosure and participation, environmental analysis, and documentation.

Clean Water Act, as amended in 1977 and 1982; Primary objective of this Act is to restore and maintain the integrity of the Nation's waters. This objective translates into two fundamental national goals: 1) Eliminate the discharge of pollutants into the nation's waters; and 2) Achieve water quality levels that are fishable and swimmable. This Act established a non-degradation policy for all federally proposed projects. Under Section 303(d) of the Clean Water Act, the State has identified water quality-limited water bodies in Washington.

Clean Air Act, as amended in 1990; Purposes of this Act are "*to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population; to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution; to provide technical and financial assistance to state and local governments in connection with the development and execution of their air pollution prevention and control programs; and to encourage and assist the development and operation of regional air pollution prevention and control programs."*

Multiple-Use Sustained-Yield Act of 1960; This Act requires the Forest Service to manage National Forest System lands for multiple uses (including timber, recreation, fish and wildlife, range, and watershed). All renewable resources are to be managed in such a way that they are available for future generations. The harvesting and use of standing timber can be considered a short-term use of a renewable resource. As a renewable

resource, trees can be re-established and grown again if the productivity of the land is not impaired.

Migratory Bird Executive Order (EO) 13186; On January 10, 2001, President Clinton signed an Executive Order (EO 13186) titled "Responsibilities of Federal Agencies to Protect Migratory Birds." This EO required the "*environmental analysis of Federal actions, required by NEPA or other established environmental review processes, evaluated the effects of actions and agency plans on migratory birds, with emphasis on species of concern."*

Floodplains and Wetlands (EO 11988 and 11990); These 1977 orders are to "…*avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development…"* and similarly "…*avoid to the extent possible the long and short-term adverse impact associated with the destruction or modification of wetlands*."

Executive Order 13112 (invasive species); This 1999 order requires Federal agencies whose actions may affect the status of invasive species to identify those actions and within budgetary limits, "*(i) prevent the introduction of invasive species; (ii) detect and respond rapidly to and control populations of such species…, (iii) monitor invasive species populations…, (iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded, … (v) promote public education on invasive species…and not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species… unless, pursuant to guidelines that it has prescribed, the agency had determined and made public… that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions."*

Executive Order 13287 (preserve America); This 2003 order's intent is to preserve America's heritage though "*actively advancing the protection, enhancement, and contemporary use of the historic properties owned by the Federal Government… The Federal Government shall recognize and manage the historic properties in its ownership as assets that can support department and agency missions while contributing to the vitality and economic well-being of the Nation's communities and fostering a broader appreciation for the development of the United States and its underlying values…"*

Environmental Justice (EO 12898); On February 11, 1994, President Clinton signed Executive Order 12898. This order directs each Federal agency to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. On the same day the President also signed a memorandum emphasizing the need to consider these types of effects during NEPA analysis. On March 24, 1995, the Department of Agriculture completed an implementation strategy for the executive order. Where Forest Service proposals have the potential to disproportionately and adversely affect minority or low-income populations these effects must be considered and disclosed (and mitigated to the degree possible) through the NEPA analysis and documented.

Prime Farmland, Rangeland, and Forestland Memorandum; All alternatives are in accordance with the Secretary of Agriculture's Memorandum 1827 for prime farmland, rangeland, and forestland. "Prime" forestland is a term used only for non-Federal land.

National Forest Management Act (NFMA) of 1976; This act guides development and revision of National Forest Land Management Plans and has several sections to it ranging from required reporting that the Secretary must submit annually to Congress to preparation requirements for timber sale contracts. There are several important sections within the act. The National Forest Management Act of 1976 (NFMA), as implemented by the Code of Federal Regulations, states that "when trees are cut to achieve timber production objectives, the cuttings shall be made in such a way as to assure that the technology and knowledge exists to adequately restock the lands within 5 years after final harvest."

Roadless Area Conservation Rule (2001); The Roadless Area Conservation Rule was adopted by the U.S. Forest Service on January 12, 2001, after extensive public involvement as part of federal rulemaking. It generally prohibited road construction and timber cutting in 58.5 million acres of inventoried roadless areas, covering about 30 percent of the National Forest System. Court rulings make special exceptions for portions of the Tongass NF and NFS lands in Idaho. Thus, the Forest Service may not undertake activities that violate the Roadless Rule on 40 million out of the 58.5 million total acres of inventoried roadless areas.

KOOTENAI FOREST PLAN

National Forest planning takes place at several levels; national, regional, forest, and project. The Pilgrim Creek Timber Sale Project DEIS is a project-level analysis; its scope is confined to addressing the significant issues and possible environmental consequences of the project. It does not attempt to address decisions made at higher levels. It does, however, implement direction provided at those higher levels. The Kootenai National Forest Plan (1987), as amended by the Inland Native Fish Strategy (INFS) details the direction for managing the land and resources of the Kootenai National Forest. The Forest Plan embodies the provisions of the National Forest Management Act (NFMA), its implementing regulations, and other guiding documents.

The 1987 Kootenai National Forest Land Management Plan (Forest Plan) specifies Forest-wide goals regarding timber harvest and vegetation management (Forest Plan, Volume I, Chapter II, pages 1-2):

> *"Harvest the maximum amount of high risk lodgepole pine marketable, to minimize losses from the mountain pine beetle."*
>
> *"Use prescribed fire to simulate natural ecological processes, prevent excessive natural and activity fuel buildups, create habitat diversity for wildlife, reduce suppression costs, and maintain ecosystems."*

The Forest Plan also specifies (Forest Plan, Volume I, Chapter II-11):

> *"Insect and disease will be controlled to historic endemic levels, and lodgepole pine will be harvested prior to future outbreaks of mountain pine beetle. Other problems such as root rot, mistletoe, blister rust, and spruce budworm will be addressed in silvicultural prescriptions utilizing integrated pest management strategies and treatments."*
>
> *"Roads, including capital investment roads, will be built to access harvest areas on schedule."*
>
> *"The visual resource will be inventoried, evaluated, and managed throughout all management activities. Consideration of the visual resource will guide all activities seen from major travel corridors and local communities."*

Regarding soil and water, the Forest Plan states (Forest Plan, Volume I, Chapter II-7):

> *"Ground-disturbing activities such as road construction, road reconstruction and timber harvest will be accompanied by mitigating measures to prevent or reduce increases in sedimentation and stream channel erosion. The amount of harvest allowed will depend on the rate of hydrologic recovery after timber has been removed."*
>
> *"Each project plan for which use of heavy equipment is required shall evaluate the effect of operating that equipment on soil productivity."*

Management Areas provide for a unique combination of activities, practices, and uses. Chapter III of the Forest Plan contains a detailed description of each MA. Table 1-1 displays a summary of the applicable MAs and standards for this project. This project is consistent with applicable Forest Plan standards and goals.

The Forest Plan is one of many documents that provided guidance and contributed to the development of this project. Other documents include:

- *USDA Forest Service Strategic Plan for Fiscal Years 2007-2012*
- *Integrated Restoration and Protection Strategy in the Northern Region*
- *Northern Region Overview Detailed Report (1998)*
- *2001 National Fire Plan (PF Doc. CR-033); Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment 10-Year Comprehensive Strategy, 2006*
- *Interior Columbia Basin Strategy*

Forest Plan Management Areas

Management areas provide direction for implementing the Forest Plan and are routinely validated during project development. Old growth (MA 13 and other old growth designations) was validated for this project through field surveys that resulted in some previously designated old growth being removed from old growth status and some previously undesignated stands being classified as old growth. Additionally, some areas of MA18 were reclassified as either MA10 or MA 12 in the upper West Fork of Pilgrim Creek. MA18 areas are considered difficult to regenerate following timber harvest for various reasons. In Pilgrim Creek, these areas were reclassified due to field verification of abundant regeneration occurring in these areas and deeper, more productive soils than is typical of other areas of MA18. Some areas where site conditions warranted a classification of MA18 still remain as such. This Forest Plan amendment process is documented in the administrative file for the Pilgrim Project.

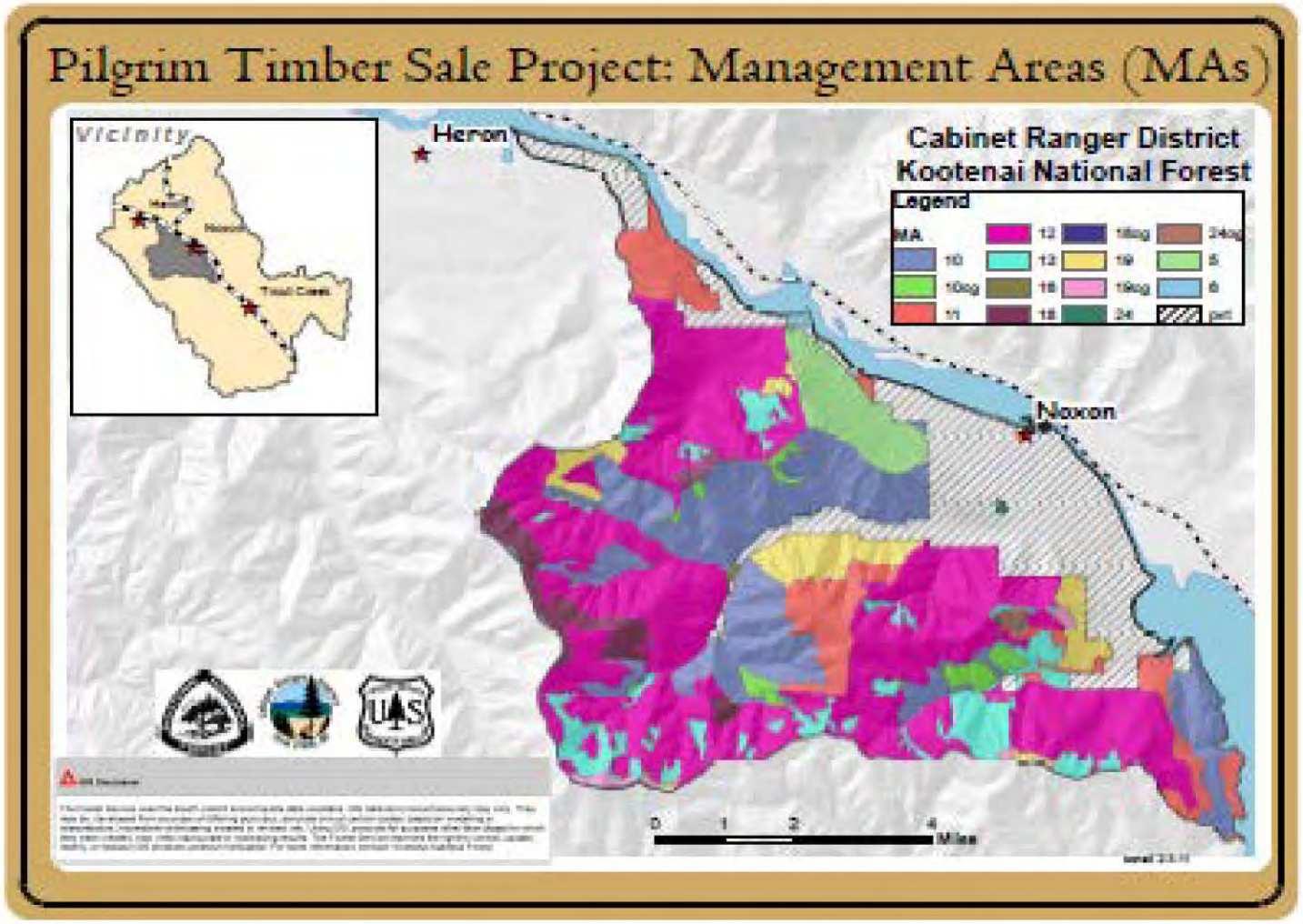
Table 1-1. Pilgrim Creek Project Area Management Area Descriptions and Goals

MA	Management Emphasis	Acres	% of area (NFS lands)
5	**Viewing Areas** **Description:** Areas in the often-viewed foreground and mid-ground in highly sensitive view-sheds, generally along major travel corridors, including Highway 200. **Goals:** Maintain or enhance the landscape to provide a pleasing view, provide livestock and big game forage, and provide old growth habitat for associated species.	1346	5%
6	**Developed Recreation Sites** **Description:** Includes developed campgrounds, picnic areas, boat ramps, and other developed recreation sites. **Goals:** Will be managed to provide safe and sanitary developed recreation in a setting that is pleasant and visually attractive.	43	<1%
10	**Big Game Winter Range** **Description:** Occurs on lands used by most species of big game (elk, moose, sheep, whitetail and mule deer) for winter range. **Goals:** Maintain or enhance habitat effectiveness for winter use by big game species and maintain the viewing resource in areas of high visual significance.	6306	21%
10 OG	**Designated Old Growth on Big Game Winter Range** **Description:** Old growth forest that occurs on lands used by most species of big game (elk, moose, sheep, whitetail and mule deer) for winter range. **Goals:** See MA 13	524	2%
11	**Big Game Winter Range** **Description:** Occurs on lands used by most species of big game for winter range. It is found at lower elevations in most drainages, and the topography ranges from steep to moderate and rolling topography. **Goals:** Maintain or enhance habitat effectiveness for winter use by big game species while producing a programmed yield to timber, and maintain the viewing resource in areas of high visual significance.	2552	9%
12	**Big Game Summer Range** **Description:** Occurs mostly above 4,000 feet on moderate terrain; used by most species of big game from late spring through late fall. **Goals:** Maintain or enhance habitat effectiveness for non-winter big game habitat and produce a programmed yield of timber.	14,494	46%

MA	Management Emphasis	Acres	% of area (NFS lands)
13	**Designated Old Growth Timber** **Description:** Existing old growth or mature timber stands which contain components of old growth. **Goals:** Provide the specialized habitat necessary for old growth dependent wildlife on a minimum of 10% of each major drainage on the Forest	2361	8%
16	**Timber With Viewing** **Description:** Productive forest land with moderate viewing sensitivity. Usually located in the middle ground or background of major travel corridors, or the foreground to middle ground of well traveled, secondary travel corridors. **Goals:** Produce timber while providing for a pleasing view	25	<1%
18	**Regeneration Problem Areas** **Description:** Occurs on area of steep slopes in excess of 40% where timber productivity is moderate to high. This MA is distinguished by the difficulty in establishing coniferous regeneration after timber harvest. **Goals:** Maintain existing vegetation until techniques and practices are available to insure that timber can be harvested and the area regenerated within 5 years of harvest.	417	1%
18 OG	**Old Growth in Regeneration Problem Areas** **Description:** Old growth forest that occurs on area of steep slopes in excess of 40% where timber productivity is moderate to high. This MA is distinguished by the difficulty in establishing coniferous regeneration after timber harvest. **Goals:** See MA 13	18	<1%
19	**Steep Lands** **Description:** Occurs on steep slopes and break lands over 60%. **Goals:** Insure soil stability and water quality by maintaining the vegetation in a healthy condition and by minimizing surface disturbance.	1622	5%
19 OG	**Old Growth on Steep Lands** **Description:** Old growth forest that occurs on steep slopes and break lands over 60%. **Goals:** See MA 13	172	1%

MA	Management Emphasis	Acres	% of area (NFS lands)
24	**Low Productivity Areas** **Description:** Areas at mid to high elevations with little productive capacity for many of the surface resources on the Forest. They are moderate to steep, usually rocky with thin soils. **Goals:** Manage for site protection, primarily, and for any wildlife resources that may be inherent.	29	<1%
24 OG	**Old Growth in Low Productivity Areas** **Description:** Old growth forest in areas at mid to high elevations with little productive capacity for many of the surface resources on the Forest. They are moderate to steep, usually rocky with thin soils. **Goals:** See MA 13.	66	<1%
Total Acres Under Forest Service Jurisdiction		**29,976**	
Private Ownership		**6,626**	

Figure 1-4. Forest Plan Management Area Distribution in Pilgrim Creek.



TIERING AND INCORPORATING BY REFERENCE

In order to eliminate repetition and focus on site-specific analysis, this DEIS is tiered to the following documents as permitted by 40 CFR 1502.20.

- The ***Kootenai National Forest Land and Resource Management Plan (Forest Plan)* FEIS** and Record of Decision (ROD), 1987 and all subsequent NEPA analysis for amendments, and the accompanying ***Land and Resource Management Plan(LRMP)* as amended (Forest Plan).** The Forest Plan guides all natural resource management activities and establishes management standards and guidelines for the Kootenai National Forest. It describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management.

This DEIS also incorporates by reference the following documents:

- The **Biological Opinion for the *Implementation of Inland Native Fish Strategy (INFS***) from National Marine Fisheries Service dated January 23, 1995. INFS sets in place certain riparian management goals and management direction with the intent of arresting the degradation and beginning the restoration of riparian and stream habitats.

- The **Biological Opinion for the *Effects to Bull Trout from Continued Implementation of Land and Resource Management Plans and Resource Management Plans as Amended by the Interim Strategy for Managing Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, Western Montana, and Portions of Nevada (INFIS)*** from National Marine Fisheries Service, dated August 14, 1998. This BO addresses the effects of continued implementation of LRMPs as amended by INFS standards and guidelines where listed distinct population segments of bull trout occur in Idaho, Montana, Oregon, and Washington.

- The **Record of Decision and Biological Opinion for the *Northern Rockies Lynx Management Direction (March 2007),*** from the U.S. Forest Service. This decision amended into all Forest Plans in the planning area, which includes the Kootenai National Forest. The BO addresses the effects of continued implementation of the Kootenai's LRMP as amended by the associated lynx management standards and guidelines.
- The **annual *Forest Plan Monitoring and Evaluation Reports*** from 2000 through 2011. The main focus of the Kootenai's monitoring strategy is to ensure consistency in implementing the Forest Plan.

- The Record of Decision and Environmental Impact Statement for the ***Kootenai National Forest Invasive Plant Management***, Kootenai National Forest, April 2007, which Implements a long-term integrated weed management program for projects beginning in 2007.

- The ***Integrated Scientific Assessment for Ecosystem Management in the Interior Columbia Basin*** released 1996. Links landscape, aquatic, terrestrial, social, and economic characterizations to described biophysical and social systems.

- The Record of Decision and EIS for the ***Forest Plan Amendments for Motorized Access within the Selkirk and Cabinet-Yaak Grizzly Bear Recovery Zones*** **(for Kootenai, Lolo, and Idaho Panhandle National Forests) released in November 2011.** This is a programmatic decision to change the Forest Plans for these Forests by amending the objectives, standards and guidelines that address grizzly bear management within the Selkirk and Cabinet-Yaak recovery zones.

Project Record

This DEIS hereby incorporates by reference the entire project record [40 CFR 1502.21]. The project record contains resource specialist reports and other technical documentation used to support the analysis and conclusions in this DEIS. Other sources of information, documents, published studies, and books referred to in the project record and this document are also included.

Relying on specialists reports and the project record helps implement the CEQ's regulation provision that agencies should reduce NEPA paperwork (40 CFR 1500.4), that environmental documents shall be analytic rather than encyclopedic, and that EISs/EAs shall be kept concise and no longer than absolutely necessary (40 CFR 1502.2). The objective is to furnish enough site-specific information to demonstrate a reasoned consideration of the environmental effects of the alternatives and how these effects can be mitigated, without repeating detailed analysis and background information available elsewhere. Additional documentation and more detailed analyses of project area resources are located in the Pilgrim Creek Timber Sale project record located at the Cabinet Ranger District, Trout Creek, Montana.

DECISIONS TO BE MADE

The Responsible Official for this DEIS is the Forest Supervisor for the Kootenai National Forest. Given the purpose and need, the Forest Supervisor reviews the proposed action, the other alternatives, the environmental consequences, and public comments on the analysis to make the following decisions and will document them in the Record of Decision that will accompany the Final Environmental Impact Statement:

- Whether to implement timber management activities (silvicultural treatments, logging methods, road work, slash treatment, reforestation), including design features to protect resources, and if so, the site-specific location of these activities and practices.
- Whether to implement prescribed burning, and if so, the selection and site-specific location of appropriate prescribed burning practices.
- Whether road access restrictions or other actions are necessary to meet big game wildlife security or grizzly bear habitat needs.
- What, if any, specific project monitoring requirements are needed to assure design features are implemented and effective, or to evaluate the success of project objectives.
- Whether or not a project specific Forest Plan amendment for MA 12 is necessary to meet the specific purpose and need of this project and whether this amendment is significant under NFMA.